

REMARKS

The Office examined claims 1-20 and rejected claims 1, 4-12 and 15-20. With this paper, various of the claims are amended in ways believed to be matters of form only, two claims (8 and 12) are changed to clarify a reference to an antecedent, no claims are canceled, and two new claims (21 and 22) are added having limitations that correspond to the limitations of claims 8 and 12 (and including the limitation of claim 10), so that claims 1-22 remain in the application.

This paper requests that the finality of the Office action be rescinded, for the reasons given below. This paper also requests that even if the finality of the Office action is not rescinded, the amendment be entered since even though new claims are added to the case, the new claims correspond, for examination purposes, to already existing claims.

Request to rescind finality of Office action

The Office has made final the Office action mailed 6 June 2006, to which this paper responds. Applicant respectfully submits that there is no proper basis for making this second Office action final. The MPEP at 706.02(a) explains that:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). [Emphasis added.]

The reference applied here (Gunnarsson, as below) is new. In response to the previous Office action, applicant in effect only amended the claims to make even more clear that it is the device that obtains information about currently active cellular network systems. This is already clear from claim as filed and from the

description. Also, the claims were amended to incorporate into the body of the claim the limitation originally recited in the preamble, that the network connection is being established on behalf of an application hosted by the device. Applicant respectfully submits that the new ground of rejection is therefore not "necessitated by applicant's (merely clarifying) amendment of the claims." No additional limitations were added by the amendment in response to the first Office action. Applicant therefore respectfully requests that the finality of the second Office action be rescinded.

Changes to the claims

The claims are changed to eliminate recitation of "step." The claims are also changed to use "comprising" or "wherein," as appropriate, in place of "characterized by/in that." Applicant respectfully submits that such a change does not affect the scope of the claims. See MPEP § 2111.03 (the transitional term "comprising" is synonymous with "characterized by").

Rejections under 35 USC §102

At section 2 of the Office action, claims 1-20 are rejected under 35 USC §102 as being anticipated by U.S. Pat. App. Pub. No. 2003/0118015 (hereinafter Gunnarsson).

Claims 1 and 8 are the only independent claims.

As to claim 1, claim 1 is to a method for use by a device in establishing a network connection on behalf of an application hosted by the device, including: obtaining information about currently active cellular network systems (which may include information about connections currently in use), and deciding whether to allow establishing the connection based on factors including the information about currently active cellular network systems. The information about connections currently in use may

include identifiers for applications using the connections currently in use. The factors can also include the identity of the application making the request and the identities of the applications using connections currently in use, so as to make the decision as to whether to allow establishing the connection after taking into account the importance and type of the different applications contending for the network resources (connections). Claim 8 is a corresponding claim to a mobile terminal.

Applicant notices that the claim recites "establishing a network connection" as opposed to "establishing a cellular network connection," but applicant respectfully submits that the "network connection" is, by any reasonable reading, a cellular network connection, since a decision as to whether to allow the connection is made based on information about currently active cellular networks.

The Office relies on pars. [0012-0017] as disclosing the recited deciding of whether to allow establishing a network connection based on factors including information about currently active cellular network systems. The text at the cited location is:

[0012] FIG. 1 depicts a wireless communication network, indicated generally by the numeral 10, providing wireless communication services to mobile terminals 60 over a large geographic area. The service area is divided into a plurality of regions or "cells" 12. A cell 12 may be subdivided into sectors two or more sectors. Each cell 12 typically includes a base station 14 for communicating with mobile terminals 60 within that cell 12. As used herein, the term "mobile terminal" means any device capable of wireless communications, and may include a cellular radiotelephone; a Personal Digital Assistant (PDA) that combines a cellular radiotelephone with data processing capabilities; or a conventional laptop and/or palmtop computer including a radiotelephone transceiver. Mobile terminals may also be referred to as "pervasive computing" devices.

[0013] Wireless communication network 10 may provide voice services, data services, or both voice and data services. Numerous standards exist for wireless communication networks. Representative standards include Time Division Multiple

Access (TDMA) standards such as the Telecommunications Industry Association (TIA)/Electronics Industry Alliance (EIA) standard TIA/EIA-136, or the Global System for Wireless communication (GSM), and Code Division Multiple Access (CDMA) standards such as IS-95, cdma2000, and Wideband CDMA (W-CDMA). While the present invention is explained in the context of a CDMA network and provides examples utilizing features and capabilities specific to that standard, the present invention is not thus limited, and may be implemented by one of skill in the art in a wide variety of wireless communication networks, utilizing analogous features to implement the same or similar functions.

[0014] FIG. 1 additionally depicts Wireless Local Area Networks (WLANs) 20. WLANs 20 provide wireless access to high-bandwidth data networks to appropriately equipped wireless computing devices 70. As used herein, the term "wireless computing device" means a computing device, such as a laptop computer or Personal Digital Assistant (PDA), equipped with a wireless interface for connecting wirelessly with a computer network, such as the Internet or private network, via a wireless access point. WLANs may be implemented according to a variety of protocols and technical standards, such as for example, IEEE 802.11(b) (also known as "Wi-Fi"); the short-range wireless ad hoc network developed and promulgated by Telefonaktiebolaget L. M. Ericsson, known commercially as BLUETOOTH; IEEE 802.11(a); or HiperLAN/2.

[0015] WLANs 20 are characterized by high bandwidth data communications, and have a limited service coverage area. WLANs 20 may be deployed for private use within offices, universities, laboratories, and the like, and for public use in airport lounges, coffee shops, hotels, and the like. WLANs 20 may additionally be deployed over wider areas, such as a university campus, or several city blocks. Two or more WLANs 20 may be interconnected to provide high-bandwidth data communications over a metropolitan area. The areas covered by WLANs 20 typically form islands surrounded by areas with no such service. These islands are commonly referred to as "hot spots."

[0016] WLANs 20 may be provided by the same service provider as the wireless communication network 10. Alternatively, WLANs 20 may be provided by independent service providers, such as Wireless Internet Service Providers (WISPs) or site operators. User access to the WLANs 20 may be restricted, such as for example, by subscription with only subscribed users granted access, or open to the general public, either on a pay-per-use basis or without billing, such as to induce customers to patronize an establishment. The particulars of access to WLANs 20, and billings therefore, are not germane to the present invention and are not further discussed herein.

[0017] Users of wireless computing devices 70 may prefer to access WLANs 20 whenever possible for network connectivity, such as Internet access, and for high-bandwidth data transfers. However, the radio frequency interfaces in wireless computing devices 70 may consume a great deal of power when constantly or periodically searching for an active WLAN 20 connection, dramatically reducing battery life.

As can be seen, the cited text is merely a high-level description of various communication technologies, indicating different standardized types of cellular communication systems presently in use in the world (GSM, IS-95, cdma2000, and W-CDMA) and discussing wireless local area network (WLAN) technology. There is no teaching of either a device obtaining information about currently active cellular network systems, or a device deciding whether to allow establishing a network connection on behalf of an application hosted by the device based on factors including information about currently active cellular network systems.

The Office asserts that the cited text teaches "a mobile transmit[ting] a signal to a system, thus being detected by its presence at its location," which the Office asserts is encompassed by the recitation in claim 1 of a device obtaining information about currently active cellular network systems. Applicant respectfully submits that first, there is no express teaching of this. Second, what is recited in claim 1 is not a mobile station being detected (presumably by a WLAN, since that is the principal focus of Gunnarsson) as asserted by the Office as disclosed in Gunnarsson, but rather a device obtaining information about currently active cellular network systems, i.e. about a plurality of active cellular network systems, and thus, at least the opposite of what is asserted in the Office action. Further, what is recited is obtaining information about currently active cellular network systems, not WLANs, and applicant respectfully submits that as a matter of standard terminology in the art of wireless communications, a WLAN is not a "cellular network system."

The Office next asserts that the cited text teaches that "after [a] mobile is registered in the current system, the system provides the mobile with its corresponding parameters in order to be able to work in the current system, where the mobile is stationed." The Office asserts that this is encompassed by recitation in claim 1 of the device deciding whether to allow establishing a network connection on behalf of an application hosted by the device based on factors including the information about currently active cellular network systems. The cited text nowhere teaches making a decision as to whether to provide a connection to a cellular network, let alone doing so based on factors including information about currently active cellular network systems. All that is disclosed is the possibility of connecting to a cellular communication system, and also the possibility of connecting to a WLAN. But there is no teaching or suggestion of deciding whether to connect to a cellular network based on information about currently active cellular network systems, which must be understood as a plurality of currently active cellular network systems, since cellular network systems is recited in the plural form. Gunnarsson never even mentions the possibility of there being more than one currently active cellular network system.

As to claim 8, what is claimed there is a mobile the Office relies on the same portions of Gunnarsson in rejecting claim 8 as in rejecting claim 1, and also relies of pars. [0024-0026] to reject claim 8. Those paragraphs read:

[0022] Once the wireless communication network 10 has determined the location of a mobile terminal 60, that location may be compared to the known location and extent of WLANs 20. the location of the WLAN 20 may be stored in various databases and other information resources within the communication network 10. If the mobile terminal 60 is within a predetermined range of one or more WLANs 20 (for example, as measured from the center of the WLAN), the communication network 10 may notify the mobile terminal 60 of that fact via a transmission through the communication network 10. Within

the predetermined range, the mobile terminal 60 may be located within the coverage area serviced by the WLAN 20 or may be approaching such coverage area. In either case, the notification is desirable to bring the wireless computing device 70 out of an inactive state, to begin searching for WLAN 20. In one embodiment, this notification may be as simple as a paging message sent to the mobile terminal 60, causing the mobile terminal 60 to signal the user, such as by emitting a predefined "beep." Alternatively, or in addition, the wireless communication network 10 may send the mobile terminal 60 a brief text message, such as for example, "WLAN DETECTED." The communication network 10 may send the text message to the mobile terminal 60 using a defined protocol, such as the Short Message Service (SMS), which is displayed to the user. The user may then manually enable the wireless computing device 70 to search for a WLAN 20.

[0023] As shown in FIG. 3, both the mobile terminal 60 and wireless computing device 70 may be equipped with a second interface 74 for communicating with one another. The second interface 74 may comprise a wireless interface, such as a radio interface (e.g., BLUETOOTH interface) or infrared interface, or a wire or optical cable interface. In the embodiment of FIG. 3, the wireless communication network 10 determines the location of the user, which may comprise cell identification or ranging as described above, or may comprise receiving location information directly from the mobile terminal 60, that calculates its location from satellite signals received from the GPS system 50. If the user's location corresponds to the known service area of a WLAN 20, as stored in a database accessible to the wireless communication network 10, the network 10 sends an alert to the mobile terminal 60. This alert may include data, such as the carrier frequency of the WLAN 20, which can be sent utilizing in-band signaling within a SMS message. The signaling protocols could also be modified to enable such information to be transmitted to the mobile terminal 60 as a control message. The mobile terminal 60 may then signal the wireless computing device 70 (e.g., via a BLUETOOTH message) via interface 74, causing the wireless computing device 70 to power-up or otherwise enable its WLAN interface 72 to establish wireless data communication with the WLAN 20. The information signal sent to the mobile terminal 60 may simply indicate the availability of a WLAN 20, causing the computing device 70 to search for the WLAN 20. Alternatively, the information signal may include the carrier frequency of the WLAN 20, and/or various information such as the WLAN 20 system operator, access policies and protocols, services available, billing information, and the like. In this embodiment, the enabling of the WLAN interface 72 on the wireless computing device 70 is completely automatic with respect to the user. As the user moves into range of a WLAN 20, the wireless computing device 70 enables its WLAN interface 72 and connects to the WLAN 20. As the user moves

out of the range of a WLAN 20, the wireless computing device 70 shuts down its WLAN interface 72, such as by placing the circuit(s) in "sleep" mode, thus conserving battery power and compute resources.

[0024] FIG. 4 shows a third exemplary embodiment of the invention. In the embodiment shown in FIG. 4, the mobile terminal 60 is integrated with the wireless computing device 70 to form an integrated mobile unit with at least two wireless interfaces 72 and 76. The first wireless interface 72 is a WLAN interface and the second interface is a TIA/EIA/IS-2000 interface. The wireless computing device 70 communicates with the WLAN 20 via the WLAN interface 72 and communicates directly with the wireless communication network 10 via the second interface 76. In this embodiment, the mobile computing device 70 may place the first wireless interface 72 in an inactive mode when it is outside the range of a WLAN 20. As the mobile computing device moves closer to a WLAN 20, the wireless communication network 10 sends a notification to the wireless computing device 70, which is received via the second interface 76. The notification may take any of the forms described above, but preferably includes information to facilitate establishing a connection with the WLAN 20. Upon receiving the notification from the wireless communication network 10, the wireless computing device 70 wakens its WLAN interface 72, begins searching for the WLAN 20, and establishes a connection if a WLAN 20 is found. Alternatively, the user may be prompted before connecting with the WLAN 20.

All that is disclosed here is a mobile terminal (60) making a connection to a WLAN (20), based on a cellular communication system (10) informing the wireless terminal that is within reach of a WLAN service access point. There is no teaching whatsoever of a mobile station obtaining information about currently active cellular systems, and determining whether to allow establishing the connection based on factors including the information about currently active cellular network systems, as required by claim 8.

As to claims 5 and 12, rejected by the Office based on the same disclosure in Gunnarsson as used in rejecting claims 1 and 8, applicant respectfully asserts that Gunnarsson fails to teach either a system or a device hosting an application taking into account the identity of an application requesting a connection and also the identities of applications using the connections

currently in use, in deciding whether to establish a connection for the application requesting the connection, as required by claims 5 and 12.

Accordingly, applicant respectfully requests that the rejections under 35 USC §102 of claims 1, 5, 8 and 12 be reconsidered and withdrawn, and also the rejections of the other claims so rejected and not argued, in view of their dependencies.

New claims

New claim 21 recites limitations corresponding to those recited in claim 8. New claim 22 recites limitations corresponding to those recited in claims 10 and 12 (combined). Thus, new claims 21 and 22 are believed allowable over the applied art for the reasons given above in respect to claims 1, 5, 8 and 12.

Conclusion

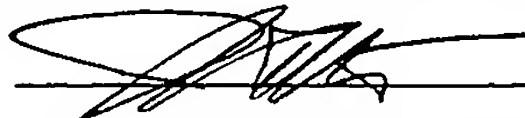
For all the foregoing reasons it is believed that all of the claims of the application are in condition for allowance and their passage to issue is earnestly solicited.

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Date

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